

Layer (type)	Output Shape	Param #
input_1 (InputLayer)	(None, 1)	0
lambda_1 (Lambda)	(None, 512)	0
dense_1 (Dense)	(None, 128)	65664
dropout_1 (Dropout)	(None, 128)	0
dense_2 (Dense)	(None, 1)	129
Total params: 65,793		
Trainable params: 65,793		
Non-trainable params: 0		

Train on 60000 samples, validate on 10000 samples

Epoch 1/20  
60000/60000 [=====] - 120s 2ms/step - loss: 0.3709 - acc: 0.8356 - val\_loss: 0.3486 - val\_acc: 0.8443  
Epoch 2/20  
60000/60000 [=====] - 111s 2ms/step - loss: 0.3396 - acc: 0.8508 - val\_loss: 0.3345 - val\_acc: 0.8529  
Epoch 3/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.3298 - acc: 0.8554 - val\_loss: 0.3280 - val\_acc: 0.8568  
Epoch 4/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.3228 - acc: 0.8590 - val\_loss: 0.3221 - val\_acc: 0.8628  
Epoch 5/20  
60000/60000 [=====] - 109s 2ms/step - loss: 0.3158 - acc: 0.8634 - val\_loss: 0.3216 - val\_acc: 0.8602  
Epoch 6/20  
60000/60000 [=====] - 106s 2ms/step - loss: 0.3098 - acc: 0.8665 - val\_loss: 0.3279 - val\_acc: 0.8584  
Epoch 7/20  
60000/60000 [=====] - 109s 2ms/step - loss: 0.3038 - acc: 0.8689 - val\_loss: 0.3182 - val\_acc: 0.8622  
Epoch 8/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.3005 - acc: 0.8720 - val\_loss: 0.3123 - val\_acc: 0.8659  
Epoch 9/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2956 - acc: 0.8740 - val\_loss: 0.3145 - val\_acc: 0.8647  
Epoch 10/20  
60000/60000 [=====] - 104s 2ms/step - loss: 0.2907 - acc: 0.8767 - val\_loss: 0.3081 - val\_acc: 0.8667  
Epoch 11/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2866 - acc: 0.8784 - val\_loss: 0.3082 - val\_acc: 0.8679  
Epoch 12/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2832 - acc: 0.8807 - val\_loss: 0.3062 - val\_acc: 0.8679  
Epoch 13/20  
60000/60000 [=====] - 105s 2ms/step - loss: 0.2792 - acc: 0.8827 - val\_loss: 0.3083 - val\_acc: 0.8653  
Epoch 14/20  
60000/60000 [=====] - 112s 2ms/step - loss: 0.2745 - acc: 0.8851 - val\_loss: 0.3062 - val\_acc: 0.8694  
Epoch 15/20  
60000/60000 [=====] - 109s 2ms/step - loss: 0.2718 - acc: 0.8867 - val\_loss: 0.3026 - val\_acc: 0.8704  
Epoch 16/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2679 - acc: 0.8885 - val\_loss: 0.3017 - val\_acc: 0.8680  
Epoch 17/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2630 - acc: 0.8905 - val\_loss: 0.3001 - val\_acc: 0.8729  
Epoch 18/20  
60000/60000 [=====] - 104s 2ms/step - loss: 0.2620 - acc: 0.8907 - val\_loss: 0.3045 - val\_acc: 0.8689  
Epoch 19/20  
60000/60000 [=====] - 104s 2ms/step - loss: 0.2574 - acc: 0.8947 - val\_loss: 0.2998 - val\_acc: 0.8744  
Epoch 20/20  
60000/60000 [=====] - 104s 2ms/step - loss: 0.2550 - acc: 0.8952 - val\_loss: 0.3011 - val\_acc: 0.8730  
30000/30000 [=====] - 41s 1ms/step

Test score: 0.295315289636453

Test accuracy: 0.8735

